

# Work Order ID 52022

September 11, 2009 1:48:24 PM



Page 1

Item ID: D212-580-041 *BK*  
 Revision ID: B2  
 Item Name: Cargo Mirror Assembly  
 Start Date: 09/14/2009 Start Qty: 1.00  
 Required Date: 09/16/2009 Req'd Qty: 1.00



Setup Start



Stop



Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: *MF* Date: *09-09-11* Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2161	Rev B2								

100  
 DOCUMENT CONTROL  
 DC  
 Document Control

0.00

Memo  
 Photocopy bluefile and create labels as per PPP D212-580-041 CHG003

0.00

*802/01/23*

*HJ for BG 09/09/22*

110  
 Large Fab  
 Large Fab  
 Large Fab

0.00

Memo  
 1-Assemble on Jig DT8065 as per Dwg D2161 2-Weld as per Dwg  
 D2161 Identify as D2161-212 A/R SS ROD Batch: *7109213*

0.00

*09.09.16*

120  
 QC  
 Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

*=> 802/01/16*

*(X)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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September 11, 2009 1:48:24 PM



Page 2

Item ID: D212-580-041

Accept



Setup Start



Revision ID: B2

Stop



Item Name: Cargo Mirror Assembly

Start Date: 09/14/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 09/16/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

12/09/09/16

140

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 8:30 AM OVEN TEMPERATURE:  
9:00 AM FINISH TIME: 3:20 PM

M109091 09/09/17

(X4)

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

BR 09/09-17

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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September 11, 2009 1:48:24 PM



Page 3

Item ID: D212-580-041

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Cust Item ID:

Required Date: 09/16/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									
170 	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control									
180 	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D212--580-041 □ Location: <u>14</u> □ PPP Rev: <u>5</u>								

9/16/09 40 SP

27 508/02/23

(X) f

9/19/23 40 SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Work Order ID 52022**

September 11, 2009 1:48:24 PM



Page 4

Item ID: D212-580-041

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Start Date: 09/14/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 09/16/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/09/23

WLF 09-09-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

September 11, 2009 1:48:23 PM

Page 1

Work Order ID: 52022

Parent Item: D212-580-041RevB2

Parent Item Name: Cargo Mirror Assembly

Start Date: 09/14/2009

Required Date: 09/16/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
CCR264SS3-2		Purchased	No			170	Each	278.0000	4.0000			



Rivet, Cherry

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

278

108688

62

108738

116

112314

100

D2011-103RevG

Manufactured

No



8" Mirror

170

Each

5.0000

2.0000

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

5

43342

5

D2013-3RevC

Manufactured

No



Mirror Bracket LH, 212

110

Each

4.0000

1.0000

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

4

51371

4

108688 SP

5278 (74) SP  
7/9/23

43342 SP

6/09/09.15 ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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September 11, 2009 1:48:23 PM

Page 2

Work Order ID: 52022

Parent Item: D212-580-041RevB2

Parent Item Name: Cargo Mirror Assembly


Start Date: 09/14/2009

Required Date: 09/16/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2013-4RevC  Mirror Bracket RH, 212		Manufactured	No			110	Each	4.0000	1.0000			

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

4

51372

4

D2037-101RevD

Manufactured

No

170

Each

12.0000

1.0000



Arm

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

12

41854

1

51373

1

51440

10

MS21059L3

Purchased

No

170

Each

476.0000

2.0000



Nut Plate

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

476

109962

26

111925

450

④ 09-09-15 ✓

① 09-09-15 ✓  
③ 09-09-15 ✓

111925 9-9-22 ④ SP

September 11, 2009 1:48:23 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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September 11, 2009 1:48:23 PM

Page 3

Work Order ID: 52022



Parent Item: D212-580-041RevB2



Parent Item Name: Cargo Mirror Assembly

Start Date: 09/14/2009

Required Date: 09/16/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS27039-1-08		Purchased	No			100	Each	3,381.000	4.0000			



Screw

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	3381	
110467	192	
110552	1189	
110835	2000	

110552 9-9-22 (4) SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**DART**

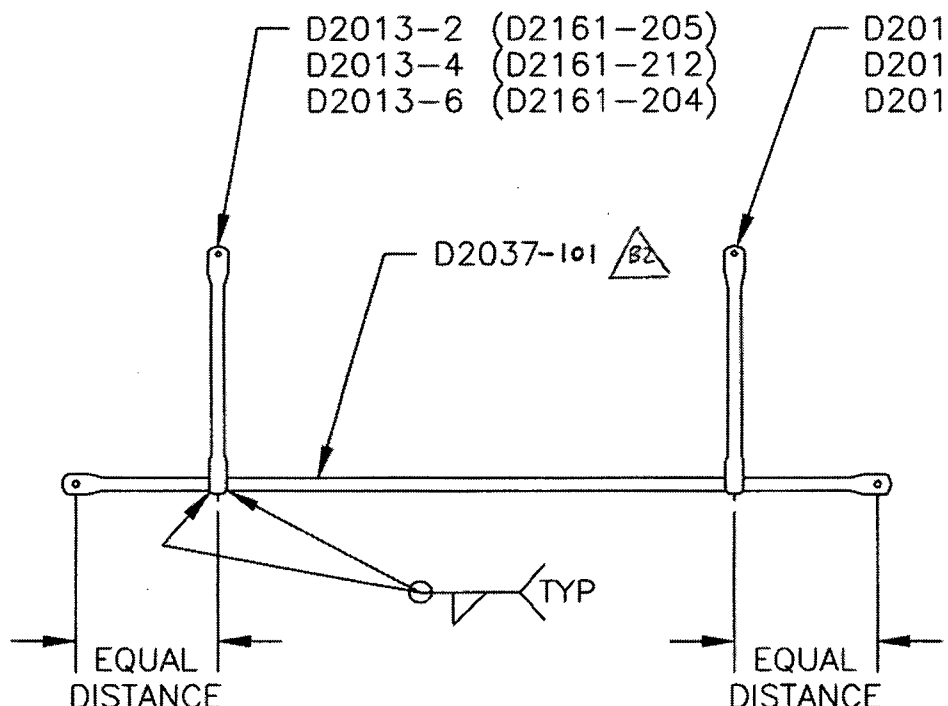


DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	REV. B
JB	RH		
CHECKED	APPROVED	DRAWING NO.	SHEET 1 OF 1
JE	[Signature]	D2161	
DATE	TITLE	SCALE	NTS
99.06.07	MIRROR BRACKET		

A	93.04.29	NEW ISSUE
B	99.06.07	REDRAWN FOR CLARITY ADDED -204/-205/-212 DESIGNATIONS
B1	02.03.25	CHANGE FINISH
B2	02.06.14	D2037-101 W

PLACE SHORTER ARM  
ON SIDE OF JIG DT8065  
LABELED FWD (TYP)

D2037-101   
D2037 WELD FLAT  
END PARALLEL TO  
THE SHORT ARM



DETAIL OF D2161-204  
DETAIL OF D2161-205  
DETAIL OF D2161-212

NOTE: WELD ASSEMBLY  
USING JIG DT8065

FINISH: ~~POWDER COAT ASSEMBLY BLACK~~  
~~CRINKLE (4.3.5.3) PER DART QSI 005 4.3~~  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER  
DART QSI 005 4.3

*2005*

**RELEASED**  
KE 99.06.10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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## 4.0 WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D204-562-041	5.0 lb	0 in	0 lb-in	3.80 in	19.0 in-lb
Dual Mirror Installation	2.3 kg	0 m	0 kg-m	0.10 m	0.23 m-kg
D205-563-041	5.0 lb	0 in	0 lb-in	3.80 in	19.0 in-lb
Dual Mirror Installation	2.3 kg	0 m	0 kg-m	0.10 m	0.23 m-kg
D212-580-041	5.0 lb	0 in	0 lb-in	-5.25 in	-26.3 in-lb
Dual Mirror Installation	2.3 kg	0 m	0 kg-m	-0.13 m	-0.30 m-kg

## 5.0 PARTS LIST

Qty 562 -041	Qty 563 -041	Qty 580 -041	Part Number	Description
X			D204-562-041	DUAL MIRROR INSTALLATION
	X		D205-563-041	DUAL MIRROR INSTALLATION
		X	D212-580-041	DUAL MIRROR INSTALLATION
2	2	2	D2011-103	MIRROR
1			D2161-204	MIRROR BRACKET
	1		D2161-205	MIRROR BRACKET
		1	D2161-212	MIRROR BRACKET
*2	*2	*2	D3015-3	LOCKNUT
*2	*2	*2	AN960JD516	WASHER
		4	CCR264SS-3-2	RIVET, BLIND
		2	MS21059L3	NUTPLATE
4	4	4	MS27039-1-08	SCREW

\* PARTS ARE INCLUDED WITH D2011-103 MIRROR

REFERENCE ONLY

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Revision: C

Date: 08.01.28